

SEQUENCE LISTING

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 Campbell, Elizabeth
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 Mustaev, Arkady
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<120> CRYSTAL OF BACTERIA CORE RNA POLYMERASE WITH RIFAMPICIN

<130> 2555-1-001

<140> UNASSIGNED

<141> 2001-03-09

<160> 4

<170> PatentIn version 3.0

<210> 1
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<212> PRT
<213> Thermus aquaticus

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<222> (1247)...(1247)
<223> Any amino acid can be placed at this position.

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Lys	Ile	Arg	Ser	Trp	Ser	Tyr	Gly	Glu	Val	Glu	Lys	Pro	Glu	Thr	Ile
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Asn	Tyr	Arg	Thr	Leu	Lys	Pro	Glu	Arg	Asp	Gly	Leu	Phe	Asp	Glu	Arg
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Ile	Phe	Gly	Pro	Ile	Lys	Asp	Tyr	Glu	Cys	Ala	Cys	Gly	Lys	Tyr	Lys
									50			55			60

Arg	Gln	Arg	Phe	Glu	Gly	Lys	Val	Cys	Glu	Arg	Cys	Gly	Val	Glu	Val
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Thr	Arg	Ser	Ile	Val	Arg	Arg	Tyr	Arg	Met	Gly	His	Ile	Glu	Leu	Ala
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Thr	Pro	Ala	Ala	His	Ile	Trp	Phe	Val	Lys	Asp	Val	Pro	Ser	Lys	Ile
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Gly	Thr	Leu	Leu	Asp	Leu	Phe	Ala	Thr	Glu	Leu	Glu	Gln	Val	Leu	Tyr
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Phe	Asn	Lys	Tyr	Ile	Val	Leu	Asp	Pro	Lys	Gly	Ala	Val	Leu	Asp	Gly
									130						140

Val	Pro	Val	Glu	Lys	Arg	Gln	Leu	Leu	Thr	Asp	Glu	Glu	Tyr	Arg	Glu
									145						160

Leu	Arg	Tyr	Gly	Lys	Gln	Glu	Thr	Tyr	Pro	Leu	Pro	Ala	Gly	Val	Asp
									165						175

Ala	Leu	Val	Lys	Asp	Gly	Glu	Glu	Val	Val	Lys	Gly	Gln	Glu	Leu	Ala
									180						190

Pro Gly Val Val Ser Arg Met Asp Gly Val Gly Ser Leu Pro Leu Pro

195	200	205
Arg Arg Val Arg Val Asp Tyr Leu Arg Lys Glu Arg Ala Ala Leu Arg		
210	215	220
Ile Pro Leu Ser Ala Trp Val Glu Lys Glu Pro Tyr Arg Pro Gly Glu		
225	230	235
240		
Val Leu Ala Glu Leu Ser Glu Pro Tyr Leu Phe Arg Ala Glu Glu Ser		
245	250	255
Gly Val Val Glu Leu Lys Asp Leu Ala Glu Gly His Leu Ile Tyr Leu		
260	265	270
Arg Gln Glu Glu Glu Val Val Ala Arg Tyr Phe Leu Pro Ala Gly Met		
275	280	285
Thr Pro Leu Val Val Glu Gly Glu Ile Val Glu Val Gly Gln Pro Leu		
290	295	300
Ala Glu Gly Lys Gly Leu Leu Arg Leu Pro Arg His Met Thr Ala Lys		
305	310	315
320		
Glu Val Glu Ala Glu Glu Glu Gly Asp Ser Val His Leu Thr Leu Phe		
325	330	335
Leu Glu Trp Thr Glu Pro Lys Asp Tyr Lys Val Ala Pro His Met Asn		
340	345	350
Val Ile Val Pro Glu Gly Ala Lys Val Gln Ala Gly Glu Lys Ile Val		
355	360	365
Ala Ala Ile Asp Pro Glu Glu Val Ile Ala Gln Ala Glu Gly Val		
370	375	380
Val His Leu His Glu Pro Ala Ser Ile Leu Val Val Lys Ala Arg Val		
385	390	395
400		
Tyr Pro Phe Glu Asp Asp Val Glu Val Thr Thr Gly Asp Arg Val Ala		
405	410	415
Pro Gly Asp Val Leu Ala Asp Gly Gly Lys Val Lys Ser Glu Ile Tyr		
420	425	430
Gly Arg Val Glu Val Asp Leu Val Arg Asn Val Val Arg Val Val Glu		
435	440	445
Ser Tyr Asp Ile Asp Ala Arg Met Gly Ala Glu Ala Ile Gln Glu Leu		
450	455	460
Leu Lys Glu Leu Asp Leu Glu Lys Leu Glu Arg Glu Leu Leu Glu Glu		
465	470	475
480		
Met Lys His Pro Ser Arg Ala Arg Arg Ala Lys Ala Arg Lys Arg Leu		
485	490	495
Glu Val Val Arg Ala Phe Leu Asp Ser Gly Asn Arg Pro Glu Trp Met		
500	505	510
Ile Leu Glu Ala Val Pro Val Leu Pro Pro Asp Leu Arg Pro Met Val		
515	520	525
Gln Val Asp Gly Gly Arg Phe Ala Thr Ser Asp Leu Asn Asp Leu Tyr		
530	535	540
Arg Arg Leu Ile Asn Arg Asn Asn Arg Leu Lys Lys Leu Leu Ala Gln		
545	550	555
560		
Gly Ala Pro Glu Ile Ile Ile Arg Asn Glu Lys Arg Met Leu Gln Glu		

565	570	575
Ala Val Asp Ala Val Ile Asp Asn Gly Arg Arg Gly Ser Pro Val Thr		
580	585	590
Asn Pro Gly Ser Glu Arg Pro Leu Arg Ser Leu Thr Asp Ile Leu Ser		
595	600	605
Gly Lys Gln Gly Arg Phe Arg Gln Asn Leu Leu Gly Lys Arg Val Asp		
610	615	620
Tyr Ser Gly Arg Ser Val Ile Val Val Gly Pro Gln Leu Lys Leu His		
625	630	635
Gln Cys Gly Leu Pro Lys Arg Met Ala Leu Glu Leu Phe Lys Pro Phe		
645	650	655
Leu Leu Lys Lys Met Glu Glu Lys Ala Phe Ala Pro Asn Val Lys Ala		
660	665	670
Ala Arg Arg Met Leu Glu Arg Gln Arg Asp Ile Lys Asp Glu Val Trp		
675	680	685
Asp Ala Leu Glu Glu Val Ile His Gly Lys Val Val Leu Leu Asn Arg		
690	695	700
Ala Pro Thr Leu His Arg Leu Gly Ile Gln Ala Phe Gln Pro Val Leu		
705	710	715
Val Glu Gly Gln Ser Ile Gln Leu His Pro Leu Val Cys Glu Ala Phe		
725	730	735
Asn Ala Asp Phe Asp Gly Asp Gln Met Ala Val His Val Pro Leu Ser		
740	745	750
Ser Phe Ala Gln Ala Glu Ala Arg Ile Gln Met Leu Ser Ala His Asn		
755	760	765
Leu Leu Ser Pro Ala Ser Gly Glu Pro Leu Ala Lys Pro Ser Arg Asp		
770	775	780
Ile Ile Leu Gly Leu Tyr Tyr Ile Thr Gln Val Arg Lys Glu Lys Lys		
785	790	795
Gly Ala Gly Met Ala Phe Ala Thr Pro Glu Glu Ala Leu Ala Ala Tyr		
805	810	815
Glu Arg Gly Glu Val Ala Leu Asn Ala Pro Ile Val Val Ala Gly Arg		
820	825	830
Glu Thr Ser Val Gly Arg Leu Lys Phe Val Phe Ala Asn Pro Asp Glu		
835	840	845
Ala Leu Leu Ala Val Ala His Gly Leu Leu Asp Leu Gln Asp Val Val		
850	855	860
Thr Val Arg Tyr Leu Gly Arg Arg Leu Glu Thr Asn Pro Gly Arg Ile		
865	870	875
Leu Phe Ala Arg Ile Val Gly Glu Ala Val Gly Asp Glu Lys Val Ala		
885	890	895
Gln Glu Leu Ile Gln Met Asp Val Pro Gln Glu Lys Asn Ser Leu Lys		
900	905	910
Asp Leu Val Tyr Gln Ala Phe Leu Arg Leu Gly Met Glu Lys Thr Ala		
915	920	925
Arg Leu Leu Asp Ala Leu Lys Tyr Tyr Gly Phe Thr Leu Ser Thr Thr		

930	935	940														
Ser	Gly	Ile	Ile	Thr	Ile	Gly	Ile	Asp	Asp	Ala	Val	Ile	Pro	Glu	Glu	
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Lys	Gln	Arg	Tyr	Leu	Glu	Glu	Ala	Asp	Arg	Lys	Leu	Arg	Gln	Ile	Glu	
				965					970				975			
Gln	Ala	Tyr	Glu	Met	Gly	Phe	Leu	Thr	Asp	Arg	Glu	Arg	Tyr	Asp	Gln	
				980			985			990						
Val	Ile	Gln	Leu	Trp	Thr	Glu	Thr	Thr	Glu	Lys	Val	Thr	Gln	Ala	Val	
				995			1000				1005					
Phe	Asn	Asn	Phe	Glu	Glu	Asn		Tyr	Pro	Phe	Asn	Pro		Leu	Tyr	Val
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Met	Ala	Gln	Ser	Gly	Ala	Arg	Gly	Asn	Pro	Gln	Gln	Ile	Arg	Gln		
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Leu	Cys	Gly	Met	Arg	Gly	Leu	Met	Gln	Lys	Pro	Ser	Gly	Glu	Thr		
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Phe	Glu	Val	Pro	Val	Arg	Ser	Ser	Phe	Arg	Glu	Gly	Leu	Thr	Val		
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Leu	Glu	Tyr	Phe	Ile	Ser	Ser	His	Gly	Ala	Arg	Lys	Gly	Gly	Ala		
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Asp	Thr	Ala	Leu	Arg	Thr	Ala	Asp	Ser	Gly	Tyr	Leu	Thr	Arg	Lys		
	1085					1090					1095					
Leu	Val	Asp	Val	Ala	His	Glu	Ile	Val	Val	Arg	Glu	Ala	Asp	Cys		
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Gly	Thr	Thr	Lys	Tyr	Ile	Ser	Val	Pro	Leu	Phe	Gln	Met	Asp	Glu		
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Val	Thr	Arg	Thr	Leu	Arg	Leu	Arg	Lys	Arg	Ser	Asp	Ile	Glu	Ser		
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Gly	Leu	Tyr	Gly	Arg	Val	Leu	Ala	Arg	Glu	Val	Glu	Ala	Leu	Gly		
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Arg	Arg	Leu	Glu	Glu	Gly	Arg	Tyr	Leu	Ser	Leu	Glu	Asp	Val	His		
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Phe	Leu	Ile	Lys	Ala	Ala	Glu	Ala	Gly	Glu	Val	Arg	Glu	Val	Pro		
	1175					1180					1185					
Val	Arg	Ser	Pro	Leu	Thr	Cys	Gln	Thr	Arg	Tyr	Gly	Val	Cys	Gln		
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Lys	Cys	Tyr	Gly	Tyr	Asp	Leu	Ser	Met	Ala	Arg	Pro	Val	Ser	Ile		
	1205					1210					1215					
Gly	Glu	Ala	Val	Gly	Val	Val	Ala	Ala	Glu	Ser	Ile	Gly	Glu	Pro		
	1220					1225					1230					
Gly	Thr	Gln	Leu	Thr	Met	Arg	Thr	Phe	His	Thr	Gly	Gly	Xaa	Ala		
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Val	Gly	Thr	Asp	Ile	Thr	Gln	Gly	Leu	Pro	Arg	Val	Ile	Glu	Leu		
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Phe	Glu	Ala	Arg	Arg	Pro	Lys	Ala	Lys	Ala	Val	Ile	Ser	Glu	Ile		
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Asp	Gly	Val	Val	Arg	Ile	Glu	Glu	Gly	Glu	Asp	Arg	Leu	Ser	Val		

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Phe Val Glu Ser Glu Gly Phe Ser Lys Glu Tyr Lys		Leu Pro Lys
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Asp Ala Arg Leu Leu Val Lys Asp Gly Asp Tyr Val Glu Ala Gly		
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Gln Pro Leu Thr Arg Gly Ala Ile Asp Pro His Gln Leu Leu Glu		
1325	1330	1335
Ala Lys Gly Pro Glu Ala Val Glu Arg Tyr Leu Val Asp Glu Ile		
1340	1345	1350
Gln Lys Val Tyr Arg Ala Gln Gly Val Lys Leu His Asp Lys His		
1355	1360	1365
Ile Glu Ile Val Val Arg Gln Met Leu Lys Tyr Val Glu Val Thr		
1370	1375	1380
Asp Pro Gly Asp Ser Pro Leu Leu Glu Gly Gln Val Leu Glu Lys		
1385	1390	1395
Trp Asp Val Glu Ala Leu Asn Glu Arg Leu Ile Ala Glu Gly Lys		
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Val Pro Val Ala Trp Lys Pro Leu Leu Met Gly Val Thr Lys Ser		
1415	1420	1425
Ala Leu Ser Thr Lys Ser Trp Leu Ser Ala Ala Ser Phe Gln Asn		
1430	1435	1440
Thr Thr His Val Leu Thr Glu Ala Ala Ile Ala Gly Lys Lys Asp		
1445	1450	1455
Glu Leu Ile Gly Leu Lys Glu Asn Val Ile Leu Gly Arg Leu Ile		
1460	1465	1470
Pro Ala Gly Thr Gly Ser Asp Phe Val Arg Phe Thr Gln Val Val		
1475	1480	1485
Asp Gln Arg Thr Leu Lys Ala Ile Glu Glu Ala Arg Lys Glu Ala		
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Val Glu Ala Lys Glu Lys Glu Ala Pro Arg Arg Pro Val Arg Arg		
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Glu Gln Pro Gly Lys Gly Leu		
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<213> Thermus aquaticus		
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<222> (695)..(696)		
<223> Any amino acid can be at either position.		
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Pro Leu Thr Glu Ile Gln Val Glu Ser Tyr Lys Ala Leu Gln Ala
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Asp Val Pro Pro Glu Lys Arg Glu Asn Val Gly Ile Gln Ala Ala Phe
 35 40 45
 Lys Glu Thr Phe Pro Ile Glu Glu Gly Asp Lys Gly Lys Gly Leu
 50 55 60
 Val Leu Asp Phe Leu Glu Tyr Arg Ile Gly Asp Pro Pro Phe Ser Gln
 65 70 75 80
 Asp Glu Cys Arg Glu Lys Asp Leu Thr Tyr Gln Ala Pro Leu Tyr Ala
 85 90 95
 Arg Leu Gln Leu Ile His Lys Asp Thr Gly Leu Ile Lys Glu Asp Glu
 100 105 110
 Val Phe Leu Gly His Leu Pro Leu Met Thr Glu Asp Gly Ser Phe Ile
 115 120 125
 Ile Asn Gly Ala Asp Arg Val Ile Val Ser Gln Ile His Arg Ser Pro
 130 135 140
 Gly Val Tyr Phe Thr Pro Asp Pro Ala Arg Pro Gly Arg Tyr Ile Ala
 145 150 155 160
 Ser Ile Ile Pro Leu Pro Lys Arg Gly Pro Trp Ile Asp Leu Glu Val
 165 170 175
 Glu Ala Ser Gly Val Val Thr Met Lys Val Asn Lys Arg Lys Phe Pro
 180 185 190
 Leu Val Leu Leu Leu Arg Val Leu Gly Tyr Asp Gln Glu Thr Leu Val
 195 200 205
 Arg Glu Leu Ser Ala Tyr Gly Asp Leu Val Gln Gly Leu Leu Asp Glu
 210 215 220
 Ala Val Leu Ala Met Arg Pro Glu Glu Ala Met Val Arg Leu Phe Thr
 225 230 235 240
 Leu Leu Arg Pro Gly Asp Pro Pro Lys Lys Asp Lys Ala Leu Ala Tyr
 245 250 255
 Leu Phe Gly Leu Leu Ala Asp Pro Lys Arg Tyr Asp Leu Gly Glu Ala
 260 265 270
 Gly Arg Tyr Lys Ala Glu Glu Lys Leu Gly Val Gly Leu Ser Gly Arg
 275 280 285
 Thr Leu Val Arg Phe Glu Asp Gly Glu Phe Lys Asp Glu Val Phe Leu
 290 295 300
 Pro Thr Leu Arg Tyr Leu Phe Ala Leu Thr Ala Gly Val Pro Gly His
 305 310 315 320
 Glu Val Asp Asp Ile Asp His Leu Gly Asn Arg Arg Ile Arg Thr Val
 325 330 335
 Gly Glu Leu Met Ala Asp Gln Phe Arg Val Gly Leu Ala Arg Leu Ala
 340 345 350
 Arg Gly Val Arg Glu Arg Met Val Met Gly Ser Pro Asp Thr Leu Thr
 355 360 365
 Pro Ala Lys Leu Val Asn Ser Arg Pro Leu Glu Ala Ala Leu Arg Glu
 370 375 380
 Phe Phe Ser Arg Ser Gln Leu Ser Gln Phe Lys Asp Glu Thr Asn Pro
 385 390 395 400

Leu Ser Ser Leu Arg His Lys Arg Arg Ile Ser Ala Leu Gly Pro Gly
 405 410 415
 Gly Leu Thr Arg Glu Arg Ala Gly Phe Asp Val Arg Asp Val His Arg
 420 425 430
 Thr His Tyr Gly Arg Ile Cys Pro Val Glu Thr Pro Glu Gly Ala Asn
 435 440 445
 Ile Gly Leu Ile Thr Ser Leu Ala Ala Tyr Ala Arg Val Asp Ala Leu
 450 455 460
 Gly Phe Ile Arg Thr Pro Tyr Arg Arg Val Lys Asn Gly Val Val Thr
 465 470 475 480
 Glu Glu Val Val Tyr Met Thr Ala Ser Glu Glu Asp Arg Tyr Thr Ile
 485 490 495
 Ala Gln Ala Asn Thr Pro Leu Glu Gly Asp Arg Ile Ala Thr Asp Arg
 500 505 510
 Val Val Ala Arg Arg Arg Gly Glu Pro Val Ile Val Ala Pro Glu Glu
 515 520 525
 Val Glu Phe Met Asp Val Ser Pro Lys Gln Val Phe Ser Leu Asn Thr
 530 535 540
 Asn Leu Ile Pro Phe Leu Glu His Asp Asp Ala Asn Arg Ala Leu Met
 545 550 555 560
 Gly Ser Asn Met Gln Thr Gln Ala Val Pro Leu Ile Arg Ala Gln Ala
 565 570 575
 Pro Val Val Met Thr Gly Leu Glu Glu Arg Val Val Arg Asp Ser Leu
 580 585 590
 Ala Ala Leu Tyr Ala Glu Glu Asp Gly Glu Val Val Lys Val Asp Gly
 595 600 605
 Thr Arg Ile Ala Val Arg Tyr Glu Asp Gly Arg Leu Val Glu His Pro
 610 615 620
 Leu Arg Arg Tyr Ala Arg Ser Asn Gln Gly Thr Ala Phe Asp Gln Arg
 625 630 635 640
 Pro Arg Val Arg Val Gly Gln Arg Val Lys Lys Gly Asp Leu Leu Ala
 645 650 655
 Asp Gly Pro Ala Ser Glu Glu Gly Phe Leu Ala Leu Gly Gln Asn Val
 660 665 670
 Leu Val Ala Ile Met Pro Phe Asp Gly Tyr Asn Phe Glu Asp Ala Ile
 675 680 685
 Val Ile Ser Glu Glu Leu Xaa Xaa Arg Asp Phe Tyr Thr Ser Ile His
 690 695 700
 Ile Glu Arg Tyr Glu Ile Glu Ala Arg Asp Thr Lys Leu Gly Pro Glu
 705 710 715 720
 Arg Ile Thr Arg Asp Ile Pro His Leu Ser Glu Ala Ala Leu Arg Asp
 725 730 735
 Leu Asp Glu Glu Gly Ile Val Arg Ile Gly Ala Glu Val Lys Pro Gly
 740 745 750
 Asp Ile Leu Val Gly Arg Thr Ser Phe Lys Gly Glu Gln Glu Pro Ser
 755 760 765

Pro Glu Glu Arg Leu Leu Arg Ser Ile Phe Gly Glu Lys Ala Arg Asp
 770 775 780
 Val Lys Asp Thr Ser Leu Arg Val Pro Pro Gly Glu Gly Gly Ile Val
 785 790 795 800
 Val Gly Arg Leu Arg Leu Arg Arg Gly Asp Pro Gly Val Glu Leu Lys
 805 810 815
 Pro Gly Val Arg Glu Val Val Arg Val Phe Val Ala Gln Lys Arg Lys
 820 825 830
 Leu Gln Val Gly Asp Lys Leu Ala Asn Arg His Gly Asn Lys Gly Val
 835 840 845
 Val Ala Lys Ile Leu Pro Val Glu Asp Met Pro His Leu Pro Asp Gly
 850 855 860
 Thr Pro Val Asp Val Ile Leu Asn Pro Leu Gly Val Pro Ser Arg Met
 865 870 875 880
 Asn Leu Gly Gln Ile Leu Glu Thr His Leu Gly Leu Ala Gly Tyr Phe
 885 890 895
 Leu Gly Gln Arg Tyr Ile Ser Pro Val Phe Asp Gly Ala Thr Glu Pro
 900 905 910
 Glu Ile Lys Glu Leu Leu Ala Glu Ala Phe Asn Leu Tyr Phe Gly Lys
 915 920 925
 Arg Gln Gly Glu Gly Phe Gly Val Asp Lys Arg Glu Lys Glu Val Leu
 930 935 940
 Ala Arg Ala Glu Lys Leu Gly Leu Val Ser Pro Gly Lys Ser Pro Glu
 945 950 955 960
 Glu Gln Leu Lys Glu Leu Phe Asp Leu Gly Lys Val Val Leu Tyr Asp
 965 970 975
 Gly Arg Thr Gly Glu Pro Phe Glu Gly Pro Ile Val Val Gly Gln Met
 980 985 990
 Phe Ile Met Lys Leu Tyr His Met Val Glu Asp Lys Met His Ala Arg
 995 1000 1005
 Ser Thr Gly Pro Tyr Ser Leu Ile Thr Gln Gln Pro Leu Gly Gly
 1010 1015 1020
 Lys Ala Gln Phe Gly Gly Gln Arg Phe Gly Glu Met Glu Val Trp
 1025 1030 1035
 Ala Leu Glu Ala Tyr Gly Ala Ala His Thr Leu Gln Glu Met Leu
 1040 1045 1050
 Thr Ile Lys Ser Asp Asp Ile Glu Gly Arg Asn Ala Ala Tyr Gln
 1055 1060 1065
 Ala Ile Ile Lys Gly Glu Asp Val Pro Glu Pro Ser Val Pro Glu
 1070 1075 1080
 Ser Phe Arg Val Leu Val Lys Glu Leu Gln Ala Leu Ala Leu Asp
 1085 1090 1095
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 Gly Leu Ala Ser Lys Arg
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<212> PRT
<213> Thermus aquaticus

<400> 3

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Gly Asp His Tyr Gly Glu Phe Val Leu Glu Pro Leu Glu Arg Gly Phe
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Gly Val Thr Leu Gly Asn Pro Leu Arg Arg Ile Leu Leu Ser Ser Ile
35 40 45

Pro Gly Thr Ala Val Thr Ser Val Tyr Ile Glu Asp Val Leu His Glu
50 55 60

Phe Ser Thr Ile Pro Gly Val Lys Glu Asp Val Val Glu Ile Ile Leu
65 70 75 80

Asn Leu Lys Glu Leu Val Val Arg Phe Leu Asp Pro Arg Trp Arg Thr
85 90 95

Thr Leu Ile Leu Arg Ala Glu Gly Pro Lys Glu Val Arg Ala Val Asp
100 105 110

Phe Thr Pro Ser Ala Asp Val Glu Ile Met Asn Pro Asp Leu His Ile
115 120 125

Ala Thr Leu Glu Glu Gly Gly Lys Leu Tyr Met Glu Val Arg Val Asp
130 135 140

Arg Gly Val Gly Tyr Val Pro Ala Glu Arg His Gly Ile Lys Asp Arg
145 150 155 160

Ile Asn Ala Ile Pro Val Asp Ala Ile Phe Ser Pro Val Arg Arg Val
165 170 175

Ala Phe Gln Val Glu Asp Thr Arg Leu Gly Gln Arg Thr Asp Leu Asp
180 185 190

Lys Leu Thr Leu Arg Ile Trp Thr Asp Gly Ser Val Thr Pro Leu Glu
195 200 205

Ala Leu Asn Gln Ala Val Ala Ile Leu Lys Glu His Leu Asn Tyr Phe
210 215 220

Ala Asn Pro Glu Ala Ser Leu Leu Pro Thr Pro Glu Val Ser Lys Gly
225 230 235 240

Glu Lys Arg Glu Ser Ala Glu Glu Asp Leu Asp Leu Pro Leu Glu Glu
245 250 255

Leu Gly Leu Ser Thr Arg Val Leu His Ser Leu Lys Glu Glu Gly Ile
260 265 270

Glu Ser Val Arg Ala Leu Leu Ala Leu Asn Leu Lys Asp Leu Arg Asn
275 280 285

Ile Pro Gly Ile Gly Glu Arg Ser Leu Glu Glu Ile Arg Gln Ala Leu
290 295 300

Ala Lys Lys Gly Phe Thr Leu Lys Glu
305 310

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<212> PRT

<213> Thermus aquaticus

<400> 4

Met Ala Glu Pro Gly Ile Asp Lys Leu Phe Gly Met Val Asp Ser Lys
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Tyr Arg Leu Thr Val Val Val Ala Lys Arg Ala Gln Gln Leu Leu Arg
20 25 30

His Arg Phe Lys Asn Thr Val Leu Glu Pro Glu Glu Arg Pro Lys Met
35 40 45

Arg Thr Leu Glu Gly Leu Tyr Asp Asp Pro Asn Ala Val Thr Trp Ala
50 55 60

Met Lys Glu Leu Leu Thr Gly Arg Leu Phe Phe Gly Glu Asn Leu Val
65 70 75 80

Pro Glu Asp Arg Leu Gln Lys Glu Met Glu Arg Leu Tyr Pro Thr Glu
85 90 95

Glu Glu Ala